# PART J-1 CHOLINESTERASE MONITORING

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# WAC 296-307-148 Scope and summary.

# Your responsibility:

To implement a monitoring program for your employees who, as part of their job duties, **handle** category I or II organophosphate or N-methyl-carbamate pesticides with the words "DANGER" or "WARNING" on the label.

#### **Definition:**

The terms **handle** and **handler** refer to employees who are engaged in the job duties listed in the definition of "handler" contained in WAC 296-307-11005, Pesticides (worker protection standard).

**Link:** You will find a list of pesticide products covered by this section at the Washington State Department of Agriculture (www.agr.wa.gov).

# **Important:**

Whenever there is reason to believe than an employee has been poisoned or injured by exposure to pesticides while on the job, you need to provide the medical services required by WAC 296-307-13055.

#### You must:

Maintain handling records for covered pesticides WAC 296-307-14805

Implement a medical monitoring program WAC 296-307-14810

Identify a physician or licensed health care professional WAC 296-307-14815

Make cholinesterase testing available WAC 296-307-14820

Respond to depressed cholinesterase levels *WAC* 296-307-14825

Provide medical removal protection benefits *WAC 296-307-14830* 

Maintain records WAC 296-307-14835

Provide training *WAC 296-307-14840* 

Implementation plan WAC 296-307-14845

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 03-24-105 (Order 02-05), § 296-307-148, filed 12/03/03, effective 02/01/04].

# WAC 296-307-14805 Maintain handling records for covered pesticides.

#### You must:

- Maintain accurate records of all time that each employee spends handling category I or II
  organophosphate or N-methyl-carbamate pesticides (this includes employees who don't meet the
  handling hour thresholds in WAC 296-307-14810.
- Provide a completed CHOLINESTERASE MONITORING HANDLING HOURS REPORT (F413-065-000) to the physician or other licensed health care professional (LHCP) for each employee receiving a periodic cholinesterase blood test and make sure the report is submitted to the laboratory with each periodic cholinesterase test.
- Provide the employee with a copy of the CHOLINESTERASE MONITORING HANDLING HOURS REPORT upon request.
- Retain pesticide handling records for seven years.
- Make sure that pesticide-handling records are readily accessible to employees, their designated representatives, and treating health care professionals.

**Helpful Tool:** A form (Handler Hours Tracking) to assist you in counting handler hours can be found in the Resource section of this part.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 06-01074 (Order 05-32, § 296-307-14805, filed 12/20/2005, effective 02/01/2006. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 03-24-105 (Order 02-05), § 296-307-14805, filed 12/03/03, effective 02/01/04].

# WAC 296-307-14810 Implement a medical monitoring program.

#### You must:

• Implement a medical monitoring program for your employees who handle or will be expected to handle category I or II organophosphate or N-methyl-carbamate pesticides for thirty or more hours in any consecutive thirty-day period.

# Note:

- You don't need to count time spent mixing and loading using closed systems (as defined in WAC 296-307-13045(4)(d)) in determining the need for periodic testing. Closed cabs aren't "closed-systems." Time using closed systems is still counted for purposes of establishing coverage under this rule and determining the need for obtaining baseline cholinesterase levels.
- The first thirty consecutive day period begins on the first day of handling organophosphate or N-methyl-carbamate pesticides after obtaining the baseline cholinesterase test.
- There is nothing in this rule that prohibits employers from providing cholinesterase monitoring to employees who handle organophosphate or N-methyl-carbamate pesticides for fewer than thirty hours in any consecutive thirty-day period.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 06-01074 (Order 05-32, § 296-307-14810, filed 12/20/2005, effective 02/01/2006. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 03-24-105 (Order 02-05), § 296-307-14810, filed 12/03/03, effective 02/01/04].

## WAC 296-307-14815 Identify a physician or other licensed health care professional.

#### You must:

- Identify a physician or other licensed health care professional (LHCP) who will:
  - Provide baseline and periodic cholinesterase testing through the department of health public health laboratory or a laboratory approved by the department of labor and industries.

# WAC 296-307-14815 (Cont.)

- Interpret cholinesterase tests.
- Provide you with a written recommendation for each employee's blood test and evaluation.
- Obtain the LHCP's written recommendation for each employee's blood test and evaluation (including baseline tests) and make sure that the employee receives a copy of the LHCP's written recommendation, either through you or directly through the LHCP, within five business days after you receive the recommendation.
- Make sure the LHCP's written recommendation for each employee's blood test and evaluation is limited to the following information:
  - The employee's cholinesterase status based on the LHCP's evaluation.
  - Identification of changes in cholinesterase levels requiring a work practice evaluation for the employee.
  - Identification of changes in cholinesterase levels requiring the employee to be removed from handling and other exposure to organophosphate and N-methyl-carbamate pesticides.
  - Guidance on medical monitoring.
  - Any other relevant information concerning an employee's workplace exposure to organophosphate and N-methyl-carbamate pesticides.

**Note**: All testing for an employee should be conducted through the same laboratory. This will allow for accurate comparison between baseline and periodic tests.

#### You must:

• Instruct the LHCP to **NOT** reveal in writing or in any other communication with you any other personally identifiable medical information.

**Note**: If the LHCP written recommendation contains specific findings or diagnoses unrelated to occupational exposure, you should send it back and obtain a revised version without the additional information.

#### You must:

- Make sure the LHCP is familiar with the requirements of this rule (for example, by providing a copy of the rule or by confirming that the provider has attended training on the rule).
- Post the name, address, and telephone number of the LHCP you have identified at the locations where employees usually start their work day.
- Make sure written recommendations from the LHCP are maintained for seven years.

**Note**: You may only obtain the employee's actual test results if the employee provides the LHCP with written consent to share these results with you.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 06-01074 (Order 05-32, § 296-307-14815, filed 12/20/2005, effective 02/01/2006. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 03-24-105 (Order 02-05), § 296-307-14815, filed 12/03/03, effective 02/01/04].

# WAC 296-307-14820 Make cholinesterase testing available.

#### You must:

- Make medical monitoring available to employees who will meet the handling hour threshold of thirty or more hours in any consecutive thirty-day period (WAC 296-307-14810) at no cost and at a reasonable time and place, as follows:
  - Provide annual baseline red blood cell (RBC) and serum cholinesterase tests that are taken at least thirty days after the employee last handled organophosphate or N-methyl-carbamate pesticides.
  - Provide periodic RBC and serum cholinesterase testing:
    - ♦ Within three days after the end of each thirty-day period where the employee meets the handling hour threshold in WAC 296-307-14810; however, testing isn't required more often than every thirty days;

#### OR

- At least every thirty days for those employees who may meet the handling hour threshold in WAC 296-307-14810.
- Follow the recommendations of the LHCP regarding continued employee pesticide handling or removal from handling until a thirty-day exposure free baseline can be established.

# **Exemption:**

You don't need to provide baseline or periodic testing for those employees whose work exposure is limited to handling only N-methyl-carbamate pesticides.

#### Note:

- For employees who have had exposure to organophosphate or N-methyl-carbamate pesticides in the thirty days prior to the test obtain a working baseline. For example, a worker who initially declines cholinesterase testing and later chooses to participate in testing would obtain a "working baseline."
- For new employees, the LHCP may accept pervious baselines, if they are obtained according to this rule.

## You must:

- Obtain a signed declination statement from the LHCP for each employee who declines cholinesterase testing.
  - Employees may decline cholinesterase testing only after they receive training about cholinesterase inhibiting pesticides and discuss the risks and benefits of participation with the LHCP.
  - An employee may change his or her mind and elect to participate or decline to continue participation in the testing program at any time.
- Make sure the employee receives a copy of the signed declination statement, either through you or directly through the LHCP, within five business days after you receive the declination statement.

**Note:** If employers discourage participation in cholinesterase monitoring, or in any way interfere with an employee's decision to continue with this program, this interference may represent unlawful discrimination under RCW 49.17.160, Discrimination against employee filing, instituting proceedings, or testifying prohibited--Procedure--Remedy.

# WAC 296-307-14820 (Cont.)

**Helpful Tool:** A sample declination form can be found in the Resource section of this part. [Statutory Authority: RCW 49.17.010, .040, .050, and .060. 06-01074 (Order 05-32, § 296-307-14820, filed 12/20/2005, effective 02/01/2006. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 03-24-105 (Order 02-05), § 296-307-14820, filed 12/03/03, effective 02/01/04].

# WAC 296-307-14825 Respond to depressed cholinesterase levels.

#### You must:

- Respond to an employee's depressed cholinesterase levels by:
  - Taking the actions required in Table 1;
    - AND
  - Following any additional occupational health recommendations from the LHCP.

	Table 1				
Required Responses to an Employee's Depressed Cholinesterase Levels					
When:	Action to be taken:	Methods:			
An employee's RBC or serum cholinesterase levels fall more than twenty percent below the baseline	Evaluate the employee's workplace and work practices to identify and correct potential sources of pesticide exposure	<ul> <li>Review:</li> <li>Personal protective equipment (PPE) and its condition</li> <li>Employees' PPE usage</li> <li>General sanitation and decontamination practices and availability of decontamination facilities required by WAC 296-307-13050</li> <li>Pesticide handling practices</li> <li>Pesticide label requirements</li> </ul>			
An employee's RBC cholinesterase level falls thirty percent or more from the baseline OR  An employee's serum cholinesterase level falls forty percent or more from the baseline	Remove the employee from handling and other work exposures to organophosphate and N-methyl-carbamate pesticides such as thinning and harvesting in recently treated areas AND Evaluate the employee's work practices to identify and correct potential sources of pesticide exposure	When available; provide the employee with other duties that don't include handling and other work exposures to organophosphate and N-methyl-carbamate pesticides     Provide medical monitoring and cholinesterase testing as recommended by the LHCP     Provide salary and benefits as if employee was continuing pesticide application activities			
A removed employee's cholinesterase levels return to twenty percent or less below baseline	The employee may return to handling class I and II organophosphate and N-methyl-carbamate pesticides	Continue periodic cholinesterase monitoring			

**Helpful Tool:** To perform a work practice evaluation you may use the Worker Protection Standard checklist found in the Resource section of this part.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 06-01074 (Order 05-32, § 296-307-14825, filed 12/20/2005, effective 02/01/2006. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 03-24-105 (Order 02-05), § 296-307-14825, filed 12/03/03, effective 02/01/04].

# WAC 296-307-14830 Provide medical removal protection benefits.

#### You must:

- Provide medical removal protection benefits for a maximum of three months on each occasion:
  - An employee is temporarily removed from work due to depressed cholinesterase levels;
     OR
  - Assigned to other duties due to depressed cholinesterase levels.
- Provide medical removal protection benefits that include maintenance of the same pay, seniority
  and other employment rights and benefits of an employee as though the employee hasn't been
  removed from normal exposure to organophosphate or N-methyl-carbamate pesticides or
  otherwise limited.

**Note**: The following are examples of how a worker's pay could be maintained while medically removed from exposure to cholinesterase-inhibiting pesticides:

- A removed worker is assigned to work eight hours a day but the employer's pesticide handlers are
  working ten hours a day. The removed worker would be paid for ten hours at the handler's rate.
- The farmer pays workers two dollars more per hour when they are handling organophosphate or N-methyl-carbamate pesticides. The removed worker will be paid this premium when the pesticides are being handled on the farm; however, the worker will be paid at their usual rate when the pesticides aren't being handled on the farm.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 06-01074 (Order 05-32, § 296-307-14830, filed 12/20/2005, effective 02/01/2006. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 03-24-105 (Order 02-05), § 296-307-14830, filed 12/03/03, effective 02/01/04].

# WAC 296-307-14835 Maintain records.

#### You must:

- Make sure that the following records are maintained:
  - The name, address, and telephone number of the physician or LHCP.
  - Written recommendations and opinions received from the physician or LHCP.
  - Findings of all work practice investigations.
  - Dates when employees were medically removed from their duties and dates when employees are returned to duties that include handling organophosphate or
  - N-methyl-carbamate pesticides.
  - Signed declination statement.
- Maintain records for seven years.
- Make sure that all records are readily accessible to the employee and his or her designated representative.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 03-24-105 (Order 02-05), § 296-307-14835, filed 12/03/03, effective 02/01/04].

## WAC 296-307-14840 Provide training.

## You must:

• Make sure employees have received training before initial medical monitoring. The training must include at least the following:

# WAC 296-307-14840 (Cont.)

- The human health hazards and physical symptoms of overexposure to organophosphate and N-methyl-carbamate cholinesterase-inhibiting pesticides.
- The purpose and requirements for medical monitoring.

**Note:** Training required by this rule may be combined with other pesticide handler training as required by

**Helpful Tool:** A sample worker training program can be found in the resource section of this part. [Statutory Authority: RCW 49.17.010, .040, .050, and .060. 03-24-105 (Order 02-05), § 296-307-14840, filed 12/03/03, effective 02/01/04].

# WAC 296-307-14845 Implementation Plan.

The department will implement and complete an evaluation of this rule by doing the following:

- Organize a scientific team to oversee collection and analysis of data collected during 2004 and 2005. L&I will select representatives of the University of Washington, Washington State University, as well as other interested members of the academic and scientific communities, to participate on the team. The team will provide an initial analysis of testing data and any appropriate recommendations directly to L&I and to the cholinesterase monitoring advisory committee by November 1, 2004, and a further analysis and any appropriate recommendations by November 1, 2005. A final report and recommendations will be completed by September 30, 2006.
- Establish a cholinesterase stakeholder advisory committee to evaluate issues related to rule implementation and provide recommendations to the department regarding implementation of the rule and any possible modifications to it. L&I will invite representatives of growers, labor and affected state agencies to participate on the advisory committee. The committee will have an opportunity to comment on the analysis completed by the scientific team and to make any appropriate recommendations before December 1, 2004, and again before December 1, 2005. In addition, the committee will review the scientific committee's final report and recommendations and provide advice to L&I prior to December 1, 2006.
- Review reports from the scientific team and stakeholder advisory committee, and other relevant information and make modifications to the rule as appropriate.
- Make efforts to defray the costs of medical testing during 2004.
- Prepare and distribute provider guidelines.
- Develop and make available a model employee training program.
- Publish a list of trained providers and certified laboratories on the internet.
- Coordinate recordkeeping requirements with the department of agriculture.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 03-24-105 (Order 02-05), § 296-307-14845, filed 12/03/03, effective 02/01/04].

# Resource Section Cholinesterase Monitoring WAC 296-307-148

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# Handler Hours Tracking Form Organophosphate and N-Methyl-Carbamate Pesticides

This form can help you track handler hours as required by WAC 296-307-14805

Full Name of Handler (see back of sheet):

		Total Hours from		
Time Information:	Full Name of Pesticide(s) used or in contact with:	Previous Page = Activity (see back of sheet for examples)	Total Hours - last 30 days	Comments:
Date:				
Start time:				
Stop time:				
Less Lunch/break time:				
Total time:				
Date:				
Start time:				
Stop time:				
Less Lunch/break time:				
Total time:				
Date:				
Start time:				
Stop time:				
Less Lunch/break time:				
Total time:				

# Handler Hours Form Organophosphates and N-Methyl-Carbamates

\*"Handler" means a person, including a self-employed person.

- Who is employed for any type of compensation by an agricultural establishment or commercial pesticide handling establishment of which WAC 296-307-130 applies and who is:
  - Mixing, loading, transferring, or applying pesticides.
  - Disposing of pesticides or pesticide containers.
  - Handling opened containers of pesticides.
  - Acting as a flagger.
  - Cleaning, adjusting, handling, or repairing the parts of mixing, loading, or application equipment that may contain pesticide residues.
  - Assisting with the application of pesticides.
  - Entering a greenhouse or other enclosed area after the application and before the inhalation exposure level listed in the labeling has been reached or one of the ventilation criteria established by WAC 296-307-12015(3)(c) or in the labeling has been met:
    - To operate ventilation equipment.
    - To adjust or remove coverings used in fumigation.
    - To monitor air levels.
  - Entering a treated area outdoors after application of any soil fumigant to adjust or remove soil coverings such as tarpaulins.
  - Performing tasks as a crop advisor:
    - During any pesticide application.
    - Before the inhalation exposure level in the labeling has been reached or one of the ventilation criteria established by WAC 296-307-12015
       (3)(c) or in the labeling has been met.
    - During any restricted-entry interval.

The term doesn't include any person who is only handling pesticide containers that have been emptied or cleaned according to pesticide product labeling instructions or, in the absence of such instructions, have been subjected to triple-rinsing or its equivalent.

NOTE: IF YOU ARE ROUNDING WHEN COUNTING: ALWAYS ROUND UP, such as, to the nearest quarter or half hour.

ALSO, SUBTRACT BREAKS AND LUNCH FROM THE COUNT!

# **Cholinesterase Monitoring (blood test) Declination Form**

Employer:	
	certain dangerous pesticides*, I can get blood tests to tell if I have o understand that I don't have to pay for these blood tests, my cost to me.
participating in the cholinesterase block that I stop handling these pesticides for	about the blood tests and the benefits and possible disadvantages of od test program. I know that if the medical provider recommends or a short period of time, the law says my employer must continue to 3 months or until I am allowed to return to work with these
I have decided not to take the blood te blood tests, my employer will provide	ests. I understand that if I change my mind and decide to have the e the tests at no cost to me.
Employee's Name (Print)	Medical Provider Signature (Witness)
Employee's Signature	Date
Date	

\*Organophosphate and N-methyl-carbamate pesticides with the words "Danger" or "Warning" on the label.

\_\_\_\_\_

# WORKER PROTECTION STANDARD CHECKLIST OF REQUIREMENTS Chapter 296-307 WAC, Parts I and J-1

Washington State Department of Agriculture Pesticide Management P.O. Box 42589, Olympia, WA 98504-2589 (360)902-2040

NAME	3				DATE	TIME	
ADDRESS							
CITY					STATE	ZIP	
CORP	OR CC	)-OP		NUMBER OF ACRES	NUMBER OF WORKERS	TYPE OF WORK (Seasonal, etc.)	
COIL	011 00	, 01				TITE OF WORLD (Sousonar, co.)	
VEC	NO	N/A		CENTRAL NOTI	FICATION		
YES	NO	N/A □	1.	Is central notification displayed when handlers	or workers are on the establish	nent during an application or when an	
		Ш		REI has been in effect within the last 30 days?	or womens are on the establish	an approach of when an	
			2.	Is an approved safety poster displayed?			
			3.	Is emergency medical information displayed?			
			4.	Is pesticide information displayed for each application?			
				a. Location of area treated			
				b. Product name			
				c. Active ingredient			
				d. EPA registration number			
				e. Time and date of application			
				f. Restricted Entry interval			
			5.	Does the pesticide information remain for 30 da	ays following the REI?		
			6.	Is the site easily accessible to workers/handlers	?		
Except	tion: N	o need	to displ	ay central notification if only immediate family n	nembers work on the establishi	nent.	
				TRAININ	NG		
			1.	Are handlers WSDA Certified Pesticide Applic	ators or consultants or WPS tra	ined handlers?	
			2.	Do handlers receive training before performing	a pesticide application or other	handling activity?	
			3.	Are handlers informed of labeling and have access to labels?			
			4.	Are all workers Certified Pesticide Applicators or consultants WPS trained?			
			5.	Do workers receive training before entry into treated areas?			
			6.	Do early entry workers receive training before	entry into treated areas?		
			7.	Do trainers have proper qualifications to train (trainer seminar)?	Certified Pesticide applicator, V	VPS handler, or attended WA approved	
			8.	Is training repeated every 5 years?			
			9.	Is training presented in a language the trainees	can understand?		
			10.	Is training presented orally or audio visually?			
			11.	Does the trainer respond to trainee's questions?	•		
				DECONTAMINATION			
			1.	Are handler decontamination sites supplied wit		towels and clean coveralls?	
			2.	Does handler(s) have decontamination supplies			
				a. mix/load area			
				b. within ¼ mile or closest point of vehicular a	ccess of where performing hand	ller task	
				c. where PPE is removed	<i>S</i>		
			3.	Is sufficient eye flush water immediately availa	ble to handlers and early-entry	workers?	
				a. Early entry workers 1 pint of immediately			
				b. <u>Handlers</u> – 1 pint of immediately accessible			
				eyewear.	, , , , , , , , , , , , , , , , , , , ,	r	
			4.	6 gallons additional eyewash required for handle			
				a. at decontamination sites when label requires	protective eyewear for mixing,	loading, or application	
				b. at all permanent mixing/loading stations			

				DECONTAMINATION FOR WORKERS
YE	NO	N/A		
S	_	_	1.	Are worker decontamination sites supplied with clean water (enough for routine cleaning and emergency eyewash),
			1.	soap, and towels?
			2.	Are worker decontamination sites within ¼ mile of the work site or at the closest point of vehicular access?
			3.	Does decontamination site for early entry workers have at least 10 gallons of water for employees?
				DECONTAMINATION TIME PERIOD
			1.	Are decontamination sites provided for required periods of time after expiration of REI: 7 days for 4 hour REI, and
				30 days for all other.
				NOTICE OF APPLICATIONS
			1.	When required on the label, are both oral and posted warnings given?
			2.	Are oral warnings given clearly and in a language the workers can understand and do they contain required information?
			3.	If posting:
ш	ш			
				a. Is the appropriate sign being used?
				b. Is the sign put up no more than 24 hours prior to application?
				c. Does the sign come down within 3 days of the end of the REI?
			4	d. Is the sign posted at normal worker points of entry to the treated area?
 T	4		4.	Are all greenhouse applications posted?
Excep	tions:			al warning or signs aren't needed for employees who won't be within ¼ mile of the ated area for the length of the REI; won't be in the greenhouse during the application
				d REI, or who perform the application.
				ENTRY RESTRICTIONS
			1.	Are workers not allowed in area under REI (unless permissible early entry is allowed)?
			2.	Do early entry workers (with contact) remain in the treated area for no more than 1 hour per 24 hours? (there are two
				exceptions which allow early entry for up to eight hours for limited contact activities.
			3.	Has early entry during agricultural emergencies been approved by WSDA?
				INFORMATION EXCHANGE
			1.	Has your Custom applicator provided you with required information for your central notification prior to application?
			2.	Have you provided information to the Custom Applicator about REI's in effect on your property?
			1	PPE  Is required PPE provided to bendlers and early entry workers?
			1.	Is required PPE provided to handlers and early entry workers?
			2. 3.	Are persons instructed in the proper use of PPE?
			3. 4.	Is PPE inspected before each day's use?  Are cleaning/maintenance requirements of PPE met?
			4. 5.	Is a clean place provided for PPE storage?
			<i>5</i> . 6.	Are appropriate measures taken to avoid heat related illness?
			7.	Have those cleaning PPE received special instruction?
Excep	□ tion:			me of the label required handler PPE may be omitted if using a closed system, enclosed cab or cockpit.
Елсер	uon.			eneric PPE for new limited contact early entry exceptions)
			(	EQUIPMENT SAFETY
			1.	Is equipment used for mixing, loading and applying pesticides inspected and repaired before each day of use?
			2.	Have handlers been instructed in proper use of application equipment?
				EMERGENCY ASSISTANCE
			1.	Is transportation made available to any employee who becomes sick or is believed to be injured by pesticides?
			2.	Are provisions made to supply information about the pesticide to medical personnel?
				APPLICATIONS RESTRICTIONS AND MONITORING OF HANDLERS
			1.	Are pesticides applied so that no one is contacted except appropriately trained and equipped handlers?
			2.	Is sight or voice contact made by a trained and equipped handler at least every 2 hours with a handler using a skull and crossbones pesticide?

CHOLINESTERASE MONITORING YE NO N/A Have you identified pesticide handlers likely to exceed the thresholds for work with Class I or Class II S organophosphate or N-methyl carbamate pesticides? (Note: the threshold in 2004 is 50 hours in 30 consecutive days, and in 2005: 30 hours in 30 consecutive days) Have you identified a medical provider for cholinesterase testing of your handlers? 3. Have you provided all pesticide handlers identified in item 1 with the training in item 7 and an initial medical examination. An annual baseline test, at least 30 days since the last exposure to the covered pesticide, will be included with the initial exam and employees will be given an opportunity to decline blood testing. Have you determined which schedule to provide *periodic* testing you will use? At least every 30 days from the day of the first application of covered pesticides OR Within 3 days of meeting the exposure threshold, but no more than once every 30 days (the "hours counting option")? **Exception:** Hours spent mixing and loading using closed systems (Lock 'N Load, soluble packets or "solupak") won't be counted as exposure hours for periodic testing. **Exception:** Employees who handle only N-methyl-carbamate pesticides will be exempt from the medical monitoring requirement. Have you maintained the following records? Name of medical provider Medical provider recommendations Work practice evaluations Medical removal dates Declination forms No: 7-year retention requirement for all records Have you provided training to identified pesticide handlers that includes: П П -The health hazards of organophosphate and N-methyl-carbamate pesticides -The purpose and requirements of cholinesterase monitoring Did you evaluate your Worker Protection Program to identify and correct potential exposures, for each handler with a П П П reported cholinesterase depression? Work practices Clothes Respirator Sanitation Corrective Actions Taken (use back of page if more space is required Was the employee to be temporarily removed from exposure or shifted to other work after a recommendation from your medical provider? If so, what was the first day of removal? If the employee was returned to handling specified pesticides, enter the date of return:

# **Sample Worker Training Program**

The following program will help you meet the training requirements in WAC 296-307-14840, which requires that your employees be trained before initial medical monitoring.

#### WHAT IS CHOLINESTERASE?

- 1. Cholinesterase is a substance in the body that is necessary for proper functioning of the nervous system.
- 2. If the amount of available cholinesterase falls below a safe level, the nervous system can no longer control the messages it sends to muscles.

#### WHICH PESTICIDES AFFECT CHOLINESTERASE?

- 3. Two types of pesticides, the organophosphates and the carbamates, reduce available cholinesterase. (Employer should give examples of commonly used organophosphates and carbamates)
- 4. The most dangerous organophosphate and carbamate pesticides are those with the words "DANGER" or "WARNING" on the label.
- 5. Exposures to these pesticides may occur while mixing, loading, applying and other pesticide handling activities.

#### WHAT ARE THE SYMPTOMS OF EXPOSURE?

- 6. Symptoms of overexposure may occur from single large exposure, such as spilling the pesticide, or from small exposures over a period of time, such as applying these products over an entire growing season.
- 7. Symptoms of overexposure to these pesticides include headache, dizziness, blurred vision, stomachache, diarrhea, drooling, sweating more than usual, tightness of the chest, muscle twitching, pinpoint pupils, and difficulty breathing.

# WHAT IS THE TREATMENT FOR OVEREXPOSURE?

- 8. Organophosphates and carbamates don't permanently reduce cholinesterase. New cholinesterase is made in the body.
- 9. The most common treatment for overexposure is to temporarily stop handling and other exposures to organophosphate and carbamate pesticides until cholinesterase returns to its usual level.

## HOW DO YOU AVOID OVEREXPOSURE?

- 10. Follow the pesticide worker protection program and instructions on the pesticide label.
  - > Always use personal protective equipment
  - > Always wash skin and clean equipment as directed
  - > Always respect restricted entry periods

#### CAN CHOLINESTERASE LEVELS BE MONITORED?

- 11. Yes, cholinesterase levels can be measured through simple blood tests.
- 12. Each person's usual cholinesterase level (baseline) is determined prior to handling organophosphate and carbamate pesticides.
- 13. Periodic tests taken throughout the application season are compared to the baseline to identify changes in cholinesterase levels.

#### WHY MONITOR CHOLINESTERASE LEVELS?

- 14. Benefits of cholinesterase monitoring include:
  - > Prevention of overexposure
  - > Safer workplace
  - > Improved medical care

#### WHO SHOULD BE MONITORED?

- 15. Workers who handle the most dangerous organophosphate and carbamate pesticides for 50 or more hours in any consecutive 30-day period.
- 16. In 2005 this will change to handling for 30 or more hours in any consecutive 30 -day period.

#### HOW WILL CHOLINESTERASE MONITORING BE PROVIDED?

- 17. You will be sent to a physician or clinic to discuss your option to participate in a cholinesterase-monitoring program.
- 18. Cholinesterase monitoring will be provided to you at no cost.

## WHAT WILL HAPPEN IF OVEREXPOSURE IS DETECTED?

- 19. (Your employer) may be directed to look at the worker protection program to try and eliminate the cause of your exposure.
- 20. You may be temporarily removed from exposure to organophosphate and carbamate pesticides until your cholinesterase levels return to close to baseline.
- 21. Your pay and benefits will be protected (for up to 3 months) if you are temporarily removed from handling organophosphate and carbamate pesticides.

22.

# **QUESTIONS?**

- 23. The physician or clinic can answer any question that you have about cholinesterase testing.
- 24. For questions about the Cholinesterase Monitoring Rule you can call the department of Labor & Industries at1-800-4BE-SAFE (1-800-423-7233)